HRL099
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APPARATUS, METHOD, AND
COMPUTER PROGRAM PRODUCT
FOR CONVERTING DECISION
FLOWCHARTS INTO DECISION
PROBABILISTIC GRAPHS

ABSTRACT

The present invention converts decision flowcharts into decision probabilistic graphs on a data processing system. First, a decision flowchart is received, having evidence nodes, a

5   root evidence node, and outcome nodes. The outcome nodes are related to the evidence nodes by conclusion links. Next, an operation is performed, generating a probabilistic graph based on the flowchart. The graph includes an aggregate outcome node having outcome states, with each outcome state representing an outcome node of the flowchart; a plurality of test nodes, each matching an evidence node in the flowchart, and each test

10   state matching a conclusion link from the evidence node in the flowchart, and causal links between the aggregate outcome node and the evidence nodes. Prior probabilities are calculated for outcome states based on predetermined likelihoods. Conditional probabilities are determined for test states by examining dependencies of conclusion links on the outcome nodes in the decision flowchart

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